



TYPE-R SUBWOOFER

HAUT-PARLEUR D'EXTRÊMES GRAVES TYPE-R

APPLICATION GUIDE

GUIDE D' APPLICATION

SWR-1243D

12 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (4Ω)+(4Ω)

SWR-1223D

12 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (2Ω)+(2Ω)

SWR-1043D

10 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (4Ω)+(4Ω)

SWR-1023D

10 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (2Ω)+(2Ω)

SWR-843D

8 Inch Dual Voice Coil Subwoofer (4Ω)+(4Ω)
Haut-parleur d'extrêmes graves à double bobine 8 po (4Ω)+(4Ω)

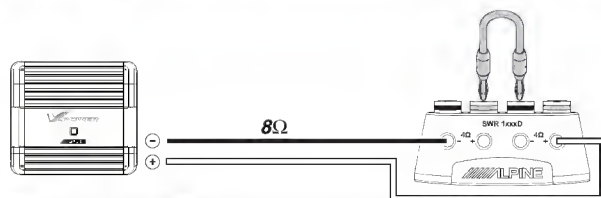
SWR-823D

8 Inch Dual Voice Coil Subwoofer (2Ω)+(2Ω)
Haut-parleur d'extrêmes graves à double bobine 8 po (2Ω)+(2Ω)

Example 1 One Amplifier and One Subwoofer

Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves

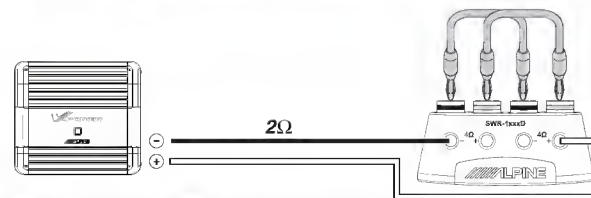
JUMPER / CAVALIER



Example 2 One Amplifier and One Subwoofer

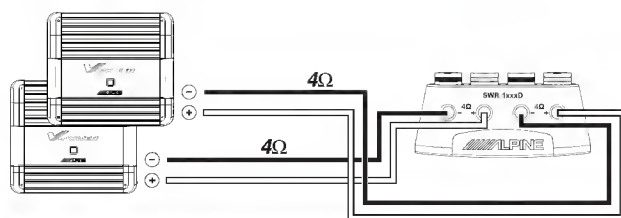
Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves

JUMPER / CAVALIER



Example 3 Two Amplifiers and One Subwoofer

Exemple 3 2 amplificateurs et 1 h.-p. d'extrêmes graves

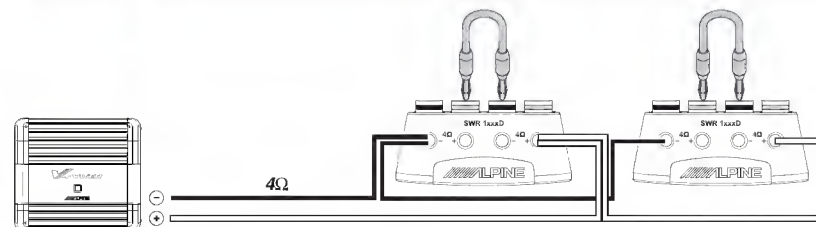


Example 4 One Amplifier and Two Subwoofers

Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves

JUMPER / CAVALIER

JUMPER / CAVALIER



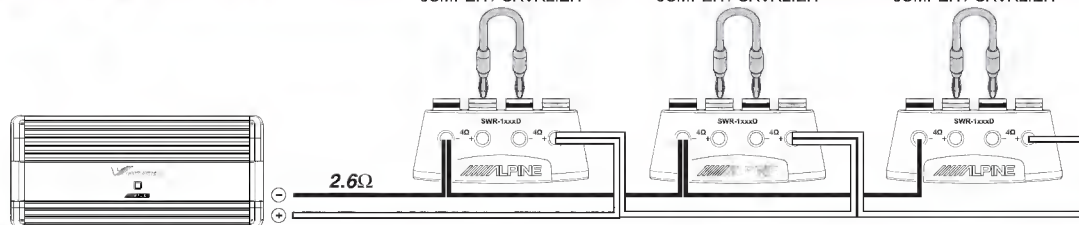
Example 5 One Amplifier and Three Subwoofers

Exemple 5 1 amplificateur et 3 h.-p. d'extrêmes graves

JUMPER / CAVALIER

JUMPER / CAVALIER

JUMPER / CAVALIER



Example 6 One Amplifier and Four Subwoofers

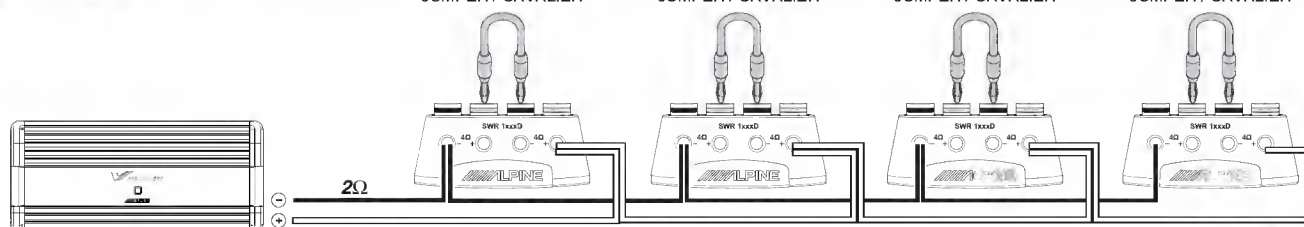
Exemple 6 1 amplificateur et 4 h.-p. d'extrêmes graves

JUMPER / CAVALIER

JUMPER / CAVALIER

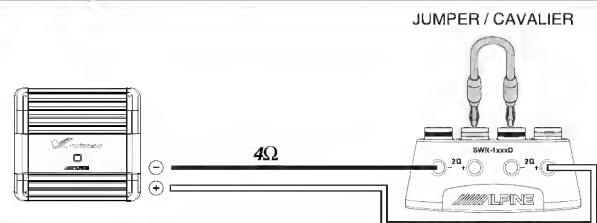
JUMPER / CAVALIER

JUMPER / CAVALIER



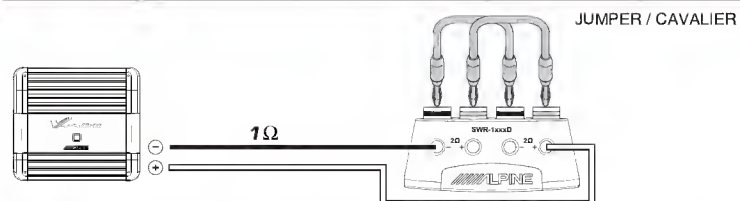
Example 1 One Amplifier and One Subwoofer

Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves



Example 2 One Amplifier and One Subwoofer

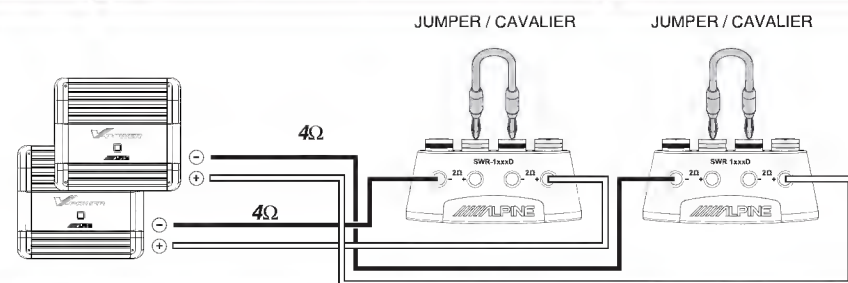
Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves



Caution ! Consult amplifier owner's manual for 1 Ω connection.
Attention : lire le manuel de l'amplificateur pour la connexion à 1 Ω .

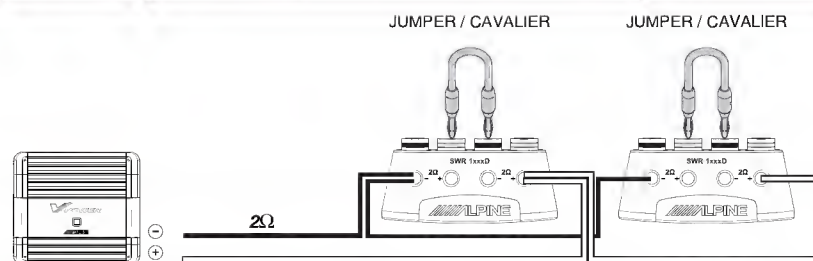
Example 3 Two Amplifiers and Two Subwoofers

Exemple 3 2 amplificateurs et 2 h.-p. d'extrêmes graves



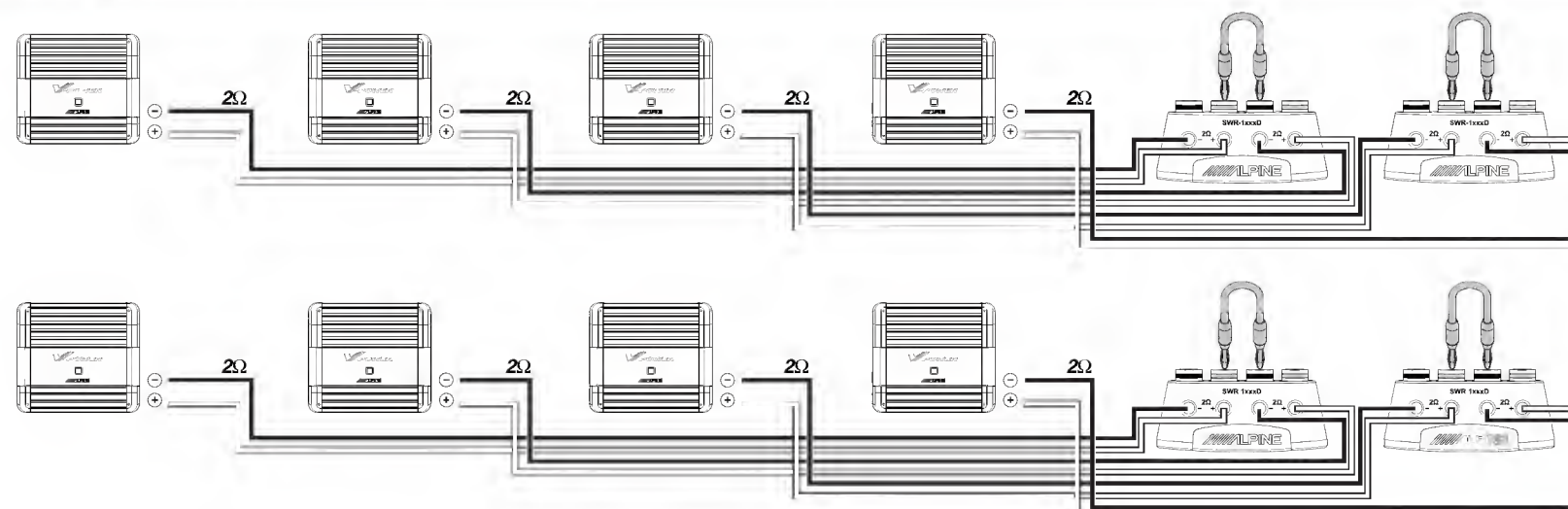
Example 4 One Amplifier and Two Subwoofers

Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves



Example 5 Eight Amplifiers and Four Subwoofers-Competition Diagram

Exemple 5 8 amplificateurs et 4 h.-p. d'extrêmes graves - schéma de compétition



Subwoofer Features and Specifications		Type-R					
Features		SWR-823D	SWR-843D	SWR-1023D	SWR-1043D	SWR-1223D	SWR-1243D
Size		8"	8"	10"	10"	12"	12"
Power Handling (RMS/peak)		350W/1000W	350W/1000W	600W/1800W	600W/1800W	600W/1800W	600W/1800W
Power Range (RMS)		150W-350W	150W-350W	300W-600W	300W-600W	300W-600W	300W-600W
Frequency Response (Hz)		28Hz-200Hz	28Hz-200Hz	26Hz-200Hz	26Hz-200Hz	24Hz-200Hz	24Hz-200Hz
Diaphragm	Material	Kevlar-Reinforced Pulp Fiber					
	Design	2-Piece Structural Parabolic					
Surround	Material	Injection Molded Santoprene®					
	Design	High Amplitude Multi-Roll (Patent Pending)					
Spider	Material	Nomex®					
	Design	Progressive					
Voice Coil	Material	180°C High Temp Wire on Spiral Cut Aluminum Former					
	Design	4-Layer Dual Voice Coil					
Motor Structure	Pole Geometry	Compound Radius Curve (US Patent #6,639,993)					
	Configuration	Integrated Shorting Sleeve with Radial Vented VC Heat Transfer (US Patents #7,634,101; #7,272,238; other Patents Pending)					
Magnet	Material	High-Power Strontium Ferrite					
	Configuration	6-Piece (8") / 10-Piece (10"/12") Radially Segmented, Double Stacked					
Frame	Material	Cast Aluminum					
	Design	Single-Piece Casting with Airflow Management System (US Patent #6,678,837; #7,684,585; other Patents Pending)					
Terminals	Layout	One Sided					
	Design	Heavy Duty 8ga. Push with Housing, Banana Sockets for VC Configuration Jumpers					
Tinsel Leads	Design	Reinforced Layer Spider Integration (US Patent #6,810,988)					
Gasket	Design	Concealed Mount Gasket System and Integrated Grill Ready (US Patent #7,760,900)					
Enclosure Information							
Mounting Depth		115 mm (4.525")	115 mm (4.525")	149 mm (5.875")	149 mm (5.875")	162 mm (6.375")	162 mm (6.375")
Mounting Diameter - Front Mount		176 mm (6.93")	176 mm (6.93")	231 mm (9.1")	231 mm (9.1")	275 mm (10.9")	275 mm (10.9")
Displacement - Front Mount**		0.050 ft³	0.050 ft³	0.080 ft³	0.080 ft³	0.100 ft³	0.100 ft³
Added Volume - Reverse Mount (magnet out)**		0.035 ft³	0.035 ft³	0.055 ft³	0.055 ft³	0.090 ft³	0.090 ft³
Recommended Enclosure Alignments		Sealed, Vented, Bandpass, Infinite Baffle		Sealed, Vented, Bandpass			
Sealed Box Volume Range (Gross)		0.15-0.50 ft³	0.15-0.50 ft³	0.5-1.0 ft³	0.5-1.0 ft³	0.65-1.25 ft³	0.65-1.25 ft³
Optimum Sealed Box	External Box Dimensions	13" x 13" x 5.5"	13" x 13" x 5.5"	12.5" x 12.5" x 10"	12.5" x 12.5" x 10"	14.5" x 14.5" x 10.5"	14.5" x 14.5" x 10.5"
	Gross Internal Volume	0.30 ft³	0.30 ft³	0.60 ft³	0.60 ft³	0.90 ft³	0.90 ft³
	Net Internal Volume**	0.25 ft³	0.25 ft³	0.50 ft³	0.50 ft³	0.75 ft³	0.75 ft³
	F ₃ , Q _{tc}	53 Hz, 0.80	53 Hz, 0.80	43 Hz, 0.90	46 Hz, 0.90	44 Hz, 0.90	43 Hz, 0.90
Vented Box Volume Range (Gross)		0.25-0.60 ft³	0.25-0.60 ft³	0.8-1.5 ft³	0.8-1.5 ft³	1.0-2.0 ft³	1.0-2.0 ft³
Optimum Vented Box	External Box Dimensions	11" x 8.5" x 20"	11" x 8.5" x 20"	12.5" x 12.5" x 20.5"	12.5" x 12.5" x 20.5"	13.5" x 13.5" x 24"	13.5" x 13.5" x 24"
	Gross Internal Volume	0.70 ft³	0.70 ft³	1.4 ft³	1.4 ft³	1.9 ft³	1.9 ft³
	Vent Area (dimensions)	5.25 in² (7" x 0.75")	5.25 in² (7" x 0.75")	11 in² (11" x 1")	11 in² (11" x 1")	15 in² (12" x 1.25")	15 in² (12" x 1.25")
	Vent Length	15.5"	15.5"	18.5"	18.5"	22"	22"
	Vent Displacement	0.10 ft³	0.10 ft³	0.24 ft³	0.24 ft³	0.29 ft³	0.29 ft³
	Net Internal Volume (V _b)***	0.55 ft³	0.55 ft³	1.1 ft³	1.1 ft³	1.5 ft³	1.5 ft³
	F ₃ , ripple, F _b	31Hz, 2dB, 36Hz	31Hz, 2dB, 36Hz	26Hz, 4.2dB, 35Hz	28Hz, 4.5dB, 35Hz	27Hz, 4.2dB, 33Hz	27Hz, 3.9dB, 33Hz
Electro-Mechanical Parameters #							
Nominal Impedance		2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
Frequency Response		28 - 200Hz	28 - 200Hz	26 - 200Hz	26 - 200Hz	24 - 200Hz	24 - 200Hz
Sensitivity (SPL @ 1W/1m)*		83.5dB	83.5dB	83dB	83dB	85dB	85dB
D.C Coil Resistance (Re)		1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω
Inductance (Le) 1kHz/20kHz		0.87mH/0.30mH	1.23mH/0.35mH	2.39mH/1.02mH	3.79mH/1.93mH	2.41mH/1.02mH	3.85mH/1.92mH
Free Air Resonance (Fs)		38Hz	40Hz	29Hz	31Hz	28Hz	31Hz
Equivalent Stiffness (Vas)		12L (0.42 ft³)	12L (0.42 ft³)	26L (0.92 ft³)	21L (0.75 ft³)	43L (1.5 ft³)	38L (1.5 ft³)
Mechanical Q (Qms)		7.8	7.5	8.7	7.9	8.5	7.9
Electrical Q (Qes)		0.55	0.60	0.53	0.57	0.50	0.57
Total Q (Qts)		0.50	0.55	0.50	0.53	0.47	0.53
Xmax ₁₀ (One-Way Xmax @ 10% Distortion)		14 mm	14 mm	20 mm	20 mm	20 mm	20 mm
Mechanical Excursion, Peak-to-Peak		52 mm	52 mm	70mm	70mm	72mm	72mm
Gap Height (Hag)		10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
Coil Height (Hvc)		29 mm	29 mm	44mm	44mm	44mm	44mm
Cone Area (Sd)		201 cm²	201 cm²	332 cm²	332 cm²	480 cm²	480 cm²
Voice Coil Diameter		40 mm (1.6")	40 mm (1.6")	65 mm (2.6")	65 mm (2.6")	65 mm (2.6")	65 mm (2.6")
Magnet Weight		52 oz	52 oz	128 oz	128 oz	144 oz	144 oz

Note: All specifications are subject to change without notice

All T/S parameters measured/calculated with voice coils connected in series, after break-in.

* This commonly misunderstood specification should not be used as a reference for subwoofer output capability.

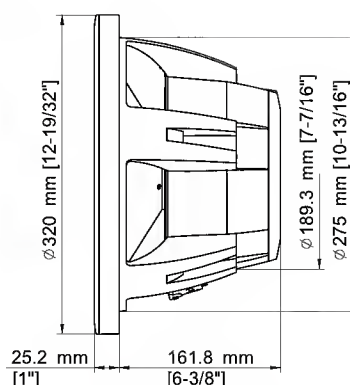
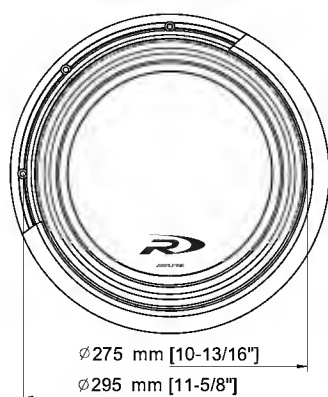
** Based upon 3/4" (19mm) baffle thickness, with opening cut approximately to gasket inner diameter

Caractéristiques et spécifications Caractéristiques	
Features	
Taille	
Puissance admissible (efficace/de crête)	
Plage de puissance (efficace)	
Réponse en fréquence (Hz)	
Membrane	Matériau Conception
Suspension	Matériau Conception
Centreur	Matériau Conception
Bobine	Matériau Conception
Moteur	Géométrie de pièce polaire Configuration
Aimant	Matériau Conception
Bâti	Matériau Conception
Bornes	Répartition Conception
Fils conducteurs	Conception
Joint d'étanchéité	Conception
Enceinte	
Profondeur de montage	
Diamètre de montage - montage avant	
Déplacement - montage avant**	
Volume ajouté - montage inversé**	
Types d'enceintes recommandés	
Volume d'enceinte close (brut)	
Enceinte close optimale	Dimensions extérieures
	Volume intérieur brut
	Volume intérieur net***
	F ₃ , Q _{tc}
Volume d'enceinte à évent (brut)	
Enceinte à évent optimale	Dimensions extérieures
	Volume intérieur brut
	Aire de l'évent (dimensions)
	Longueur de l'évent
	Déplacement de l'évent
	Volume intérieur net (V _b)***
	F ₃ , crête, F _b
Paramètres électromécaniques#	
Impédance nominale	
Réponse en fréquence	
Sensibilité (NPA @ 1 W / 1 m)*	
Résistance CC de la bobine (Re)	
Inductance (Le) 1 kHz / 20 kHz	
Résonance à l'air libre (Fs)	
Raideur équivalente (Vas)	
Q mécanique (Qms)	
Q électrique (Qes)	
Q total (Qts)	
Xmax ₁₀ (à sens unique Xmax @ 10% Distorsion)	
Déplacement mécanique, crête à crête	
Hauteur de l'écartement (Hag)	
Hauteur de la bobine (Hvc)	
Surface du diaphragme (Sd)	
Diamètre de la bobine	
Poids de l'aimant	

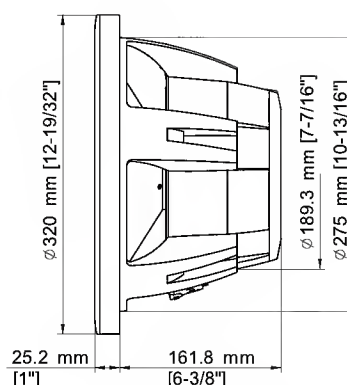
Type-R					
SWR-823D	SWR-843D	SWR-1023D	SWR-1043D	SWR-1223D	SWR-1243D
8 po	8 po	10 po	10 po	12 po	12 po
350W/1000W	350W/1000W	600W/1800W	600W/1800W	600W/1800W	600W/1800W
150W-350W	150W-350W	300W-600W	300W-600W	300W-600W	300W-600W
28Hz-200Hz	28Hz-200Hz	26Hz-200Hz	26Hz-200Hz	24Hz-200Hz	24Hz-200Hz
Pâte renforcée de Kevlar					
2 pièce parabolique					
Santoprene ^{MD} moulé par injection					
Multibourrelets à amplitude élevé (brevet en instance)					
Nomex ^{MD}					
Progressif					
Fil résistant jusqu'à 180°C, sur forme de aluminium à sillon hélicoïdal					
4 couches, double bobine					
Moteur à courbe complexe (brevet n° 6,639,993)					
Manchon de court-circuit integre avec transfer de chaluer VC a ventilation radiale (brevet n° 7,634,101; 7,272,238)					
Haut-Parleur, Strontium Ferrite					
Assemblage d'aimant segmenté, 10 pièce					
Aluminium moulé					
Bâti externe à ventilation périmétrique (brevet n° 6,678,837; 7,684,585)					
Un côté					
Solide, calibre 8, à presion avec boîtier, cavalier à fiche banane					
Intégration au centreur à renforcée (brevet n° 6,810,988)					
Système d'etanchéité à montage dissimulé et pret à recevoir une grille intégrée (brevet n° 7,760,900)					
115 mm (4.525po)	115 mm (4.525po)	149 mm (5.875po)	149 mm (5.875po)	162 mm (6.375po)	162 mm (6.375po)
176 mm (6.93po)	176 mm (6.93po)	231 mm (9.1po)	231 mm (9.1po)	275 mm (10.9po)	275 mm (10.9po)
0.050 pi³	0.050 pi³	0.080 pi³	0.080 pi³	0.100 pi³	0.100 pi³
0.035 pi³	0.035 pi³	0.055 pi³	0.055 pi³	0.090 pi³	0.090 pi³
Sealed, Vented, Bandpass, Infinite Baffle		Sealed, Vented, Bandpass			
0.15-0.50 pi³	0.15-0.50 pi³	0.5-1.0 pi³	0.5-1.0 pi³	0.65-1.25 pi³	0.65-1.25 pi³
13.33 x 13.33 x 5.55	13.33 x 13.33 x 5.55	12.5 x 12.5 x 10.5	12.5 x 12.5 x 10.5	14.5 x 14.5 x 10.5	14.5 x 14.5 x 10.5
0.30 pi³	0.30 pi³	0.60 pi³	0.60 pi³	0.90 pi³	0.90 pi³
0.25 pi³	0.25 pi³	0.50 pi³	0.50 pi³	0.75 pi³	0.75 pi³
53 Hz, 0.80	53 Hz, 0.80	43 Hz, 0.90	46 Hz, 0.90	44 Hz, 0.90	43 Hz, 0.90
0.25-0.6 pi³	0.25-0.6 pi³	0.8-1.5 pi³	0.8-1.5 pi³	1.0-2.0 pi³	1.0-2.0 pi³
11po x 8.5po x 20po	11po x 8.5po x 20po	12.5po x 12.5po x 20.5po	12.5po x 12.5po x 20.5po	13.5po x 13.5po x 24po	13.5po x 13.5po x 24po
0.70 pi³	0.70 pi³	1.4 pi³	1.4 pi³	1.9 pi³	1.9 pi³
5.25 po² (7po x 0.75po)	5.25 po² (7po x 0.75po)	11 po² (11po x 1po)	11 po² (11po x 1po)	15 po² (12po x 1.25po)	15 po² (12po x 1.25po)
15.5po	15.5po	18.5po	18.5po	22po	22po
0.10 pi³	0.10 pi³	0.24 pi³	0.24 pi³	0.29 pi³	0.29 pi³
0.55 pi³	0.55 pi³	1.1 pi³	1.1 pi³	1.5 pi³	1.5 pi³
31Hz, 2dB, 36Hz	31Hz, 2dB, 36Hz	26Hz, 4.2dB, 35Hz	28Hz, 4.5dB, 35Hz	27Hz, 4.2dB, 33Hz	27Hz, 3.9dB, 33Hz
2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
28 - 200Hz	28 - 200Hz	26 - 200Hz	26 - 200Hz	24 - 200Hz	24 - 200Hz
83.5dB	83.5dB	83dB	83dB	85dB	85dB
1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω
0.87mH/0.30mH	1.23mH/0.35mH	2.39mH/1.02mH	3.79mH/1.93mH	2.41mH/1.92mH	3.85mH/1.92mH
38Hz	40Hz	29Hz	31Hz	28Hz	31Hz
12L (0.42 pi³)	12L (0.42 pi³)	26L (0.92 pi³)	21L (0.75 pi³)	43L (1.5 pi³)	38L (1.5 pi³)
7.8	7.5	8.7	7.9	8.5	7.9
0.55	0.60	0.53	0.57	0.50	0.57
0.50	0.55	0.50	0.53	0.48	0.53
14 mm	14 mm	20mm	20mm	20 mm	20 mm
52 mm	52 mm	70mm	70mm	72mm	72mm
10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
29 mm	29 mm	44mm	44mm	44mm	44mm
201 cm²	201 cm²	332 cm²	332 cm²	480 cm²	480 cm²
40 mm (1.6 po)	40 mm (1.6 po)	65 mm (2.6 po)	65 mm (2.6 po)	65 mm (2.6 po)	65 mm (2.6 po)
52 oz	52 oz	128 oz	128 oz	144 oz	144 oz

Notes:

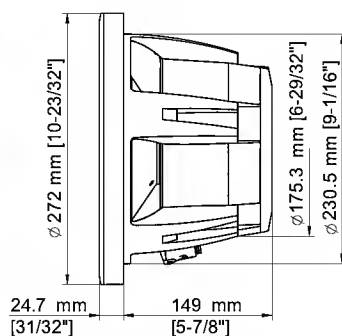
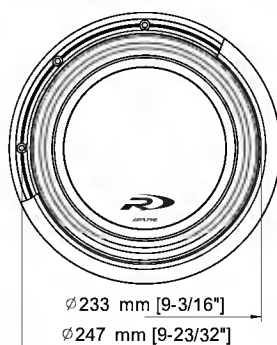
- Remarque : Les spécifications peuvent changer sans préavis.
- # Paramètres T/S mesurés/calculés avec bobines reliées en série, après rodage.
- * Ne pas utiliser cette spécification souvent mal comprise comme référence pour la puissance du haut-parleur d'extrêmes graves.
- ** Panneau de 0.75 po (19 mm) d'épaisseur, ouverture correspondant environ au diamètre intérieur du joint d'étanchéité.



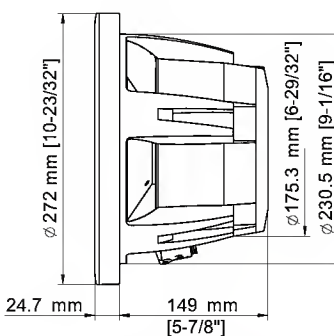
SWR-1243D



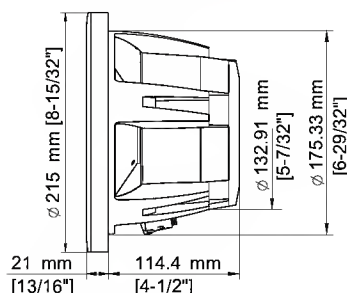
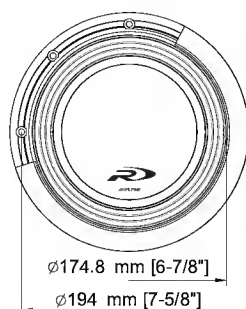
SWR-1223D



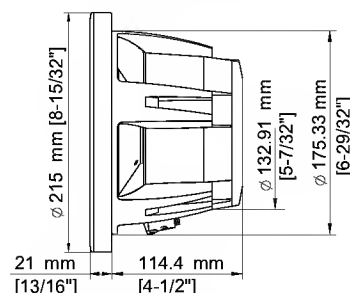
SWR-1043D



SWR-1023D



SWR-843D



SWR-823D



ALPINE ELECTRONICS, INC.
1-7 Yukigaya-otsukamachi,
Ota-ku, Tokyo 145-0067, Japan
Tel: (03) 5499-4515

ALPINE ELECTRONICS OF AMERICA, INC.
19145 Gramercy Place, Torrance,
California 90501, U.S.A.
Tel: 1-800-ALPINE-1 (1-800-257-4631)

ALPINE ELECTRONICS OF CANADA, INC.
777 Supertest Road, Toronto,
Ontario M3J 2M9, Canada
Tel: (416) 736-6211

ALPINE ELECTRONICS OF AUSTRALIA PTY. LTD.
161-165 Princes Highway, Hallam
Victoria 3803, Australia
Tel: (03) 8787-1200

ALPINE ELECTRONICS DE ESPAÑA, S.A.
Portal de Gamarra 36, Pabellón 32
01013 Vitoria (Álava). APDO. 133, Spain
Tel: (945) 283-588

ALPINE ELECTRONICS GmbH
Wilhelm-Wagenfeld-Strasse 1-3
80807 München, Germany
Tel: (089) 324-2640

ALPINE ELECTRONICS (Benelux) GmbH
Leuvensesteenweg 510-B6
1930 Zaventem, Belgium
Tel: 02-7251315

ALPINE ELECTRONICS OF U.K., LTD.
Alpine House Earplace Business Park,
Fletchamstead Highway, Coventry CV4, 9TW
United Kingdom
Tel: (2476) 719-500

ALPINE ELECTRONICS FRANCE S.A.R.L.
98, Rue de la Belle Etoile, Z.I. Paris Nord,
B.P. 50016, 95945, Roissy Charles de Gaulle
Cédex, France
Tel: (01) 4863-8989

ALPINE ITALIA S.p.A.
Viale C. Colombo 8,
20090 Trezzano Sul Naviglio (MI), Italy
Tel: (02) 484-781

Printed in CHINA